



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/680,319

10/06/2003

Tai-Cheng Yu

5458

25859

7590

03/22/2005

WEI TE CHUNG
FOXCONN INTERNATIONAL, INC.
1650 MEMOREX DRIVE
SANTA CLARA, CA 95050

EXAMINER

KIM, RICHARD H

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/680,319

Applicant(s)

YU ET AL.

Examiner

Richard H. Kim

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/6/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 8-10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 5,986,730) in view of Motomura et al. (US 6,724,446 B2).

Referring to claim 1-3, 8-10 and 13, Hansen et al. discloses a device comprising a liquid crystal panel having a reflective polarizing element (Fig. 1, ref. 15); and a backlight module having a light source for emitting light beams, a light guide plate for receiving and transferring light beams, a reflector (col. 7, lines 58-62), and a quarter wave plate for changing the polarization state of the light beams attached to the upper surface of the light guide plate (Fig. 1, ref. 25), the light guide plate (21) and the quarter wave plate being stacked together in order; the quarter-wave plate being attached to an upper surface of the light guide plate (23); wherein the liquid crystal panel is located on the backlight module (Fig. 1, ref. 11-13), and the reflecting polarizing element of the liquid crystal panel faces toward the quarter-wave plate of the backlight module (Fig. 1, ref. 15). However, the reference does not disclose that the light source is disposed adjacent to the light guide plate, wherein the reflector is attached to the bottom surface of the light guide plate.

Motomura et al. discloses a light source disposed adjacent to the light guide plate, wherein the reflector is attached to the bottom surface of the light guide plate (Fig. 1, ref. 13, 11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the light source to be disposed adjacent to the light guide plate, and the reflector attached to the bottom surface of the light guide plate since one would be motivated to provide uniform illumination over the surface of the display panel.

Referring to claim 4, Hansen et al. discloses the device previously recited. Hansen further discloses a diffuser (col. 6, lines 71), but fails to disclose that the diffuser is disposed between the liquid crystal panel and the quarter wave plate.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the diffuser to be disposed between the liquid crystal panel and the quarter wave plate since the diffuser, independent of its arrangement in the liquid crystal device, acts to diffuse light, and therefore improves uniformity. Therefore, placing the diffuser between the liquid crystal panel and the quarter-wave plate would be functionally equivalent.

Referring to claim 5, Hansen and Motomura et al. disclose the device previously recited, but fails to disclose a brightness enhancing film.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ brightness enhancing film since brightness enhancing film are well known in the art to enhance the brightness of the liquid crystal display.

Referring to claim 14, Hansen and Motomura et al. disclose the method previously recited, but fails to disclose the method wherein in a light a p-polarization component is reflected by the reflective polarizing element, and passes the quarter-wave plate twice and the reflector once, thus resulting in a conversion of "a p-polarization component to clockwise circular polarization component to a counter clockwise polarization component to an s-polarization component"

Art Unit: 2871

before the reflected and reformed p-polarization component hits the reflective polarizing element again (Fig. 1). Since structurally, Hansen and Motomura et al. discloses the claimed subject matter, the light would therefore act in the same manner as described.

3. Claims 6,7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. and Motomura et al. in view of Wang et al. (US 5,982,464).

Hansen et al. and Motomura et al. disclose the device previously recited, but fails to disclose that the quarter-wave plate is made of polyvinyl alcohol or mica.

Wang et al. discloses a quarter-wave plate made of mica (col. 4, lines 40-41).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the quarter-wave plate to be made of mica since mica is well known in the art as an effective quarter-wave plate material due to its refractive index and transparent properties. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for the quarter-wave plate to be made of polyvinyl alcohol since applicant has claimed multiple embodiments of the material in which the quarter wave plate is made. Therefore, it is evident that the material to make the quarter-wave plate is not a critical limitation.

Art Unit: 2871

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim
Examiner
Art Unit 2871

RHK


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800